

WN-16J

Phil Argiroff, Chief  
Permits Section  
Water Resources Division  
Michigan Department of Environmental Quality  
525 West Allegan  
Post Office Box 30473  
Lansing, Michigan 48909-7973

Re: U.S. Environmental Protection Agency Review of the Draft NPDES Permit for Aquila  
Resources Inc. – Back Forty Project MI0059945

Dear Mr. Argiroff:

The U.S. Environmental Protection Agency (EPA) has reviewed Michigan Department of Environmental Quality's (MDEQ) Draft National Pollutant Discharge Elimination System (NPDES) permit for the proposed Aquila Resources, Inc. – Back Forty project which was issued for public notice on August 3, 2016. EPA is providing the following comments on the draft permit.

***Protection of freshwater mussels in the Menominee River:*** EPA has reviewed the reasonable potential analysis and limits development calculations that the MDEQ completed for the Draft Permit. We concur that MDEQ has appropriately implemented Michigan's numeric criteria for acute exposures to copper at concentrations that could be toxic to aquatic life. However, we also note that freshwater mussels that are present in the Menominee River and are listed by the State of Michigan as endangered and as "species of concern" are (see Chapter 3.4 and Appendix D of the permit application) in the vicinity of the proposed outfall. Because Michigan's numeric copper criteria were developed using organisms that may be more tolerant of copper exposure than the mussels present in the Menominee River, and federal requirements at 40 CFR § 122.4(d) and 40 CFR § 122.44(d) require that permits be issued with conditions to ensure protection of narrative criteria as well as numeric criteria, we recommend that MDEQ add a test that includes freshwater mussels as the test organism to the requirements in Section I.1.i (Acute Toxicity Final Requirements) of the Draft Permit. The test should be conducted consistent with the American Society of Testing and Materials published method for conducting toxicity tests on freshwater mussels (E2455), which may be implemented in NPDES permits, with EPA approval as per 40 C.F.R. § 136.4.

***Ambient Water Quality Monitoring requirements.*** The Draft NPDES Permit would require monitoring of the outfall, but does not require ambient monitoring in the receiving waters. Because water quality impacts resulting from new mines can result in pollutant discharges not accurately predicted in a permit application, it is important that the permit include a robust monitoring plan to ensure that there is no unpermitted or undetected discharge of pollutants from the facility to the nearby surface waters of the Menominee River and the Shaky River watersheds.

Additionally, we are aware that MDEQ intends to include ambient water quality monitoring in the permit to mine, but since the permit to mine is not a permit that is subject to federal NPDES permitting or enforcement authority we believe that ambient water quality monitoring also needs to be included among the requirements of the NPDES permit.

The benefits of including explicit requirements for ambient water quality monitoring in the NPDES permit include the following:

- In-stream monitoring would enable MDEQ and EPA to determine if seepage discharges are occurring and impacting nearby surface waters,
- In-stream monitoring would enable the detection of discharges to surface waters that are not authorized by the NPDES permit,
- Ensuring clarity and transparency of applicable monitoring requirements and strengthening MDEQ's ability to enforce permit conditions,
- Access to data in a timely manner. While the permit to mine requires an annual report of the environmental monitoring data, we recommend that the ambient water quality monitoring be reported during the month following each monitoring event,
- Data reporting would be consistent with the applicant's other NPDES permit reporting requirements, and as specified at 40 C.F.R. § 122.41(l)(4)(i), which requires that data be reported on a discharge monitoring report. This also would ensure the availability of this data in MDEQ's and EPA's online databases.

We believe that MDEQ could potentially address this comment by including in the NPDES permit all of the water quality related monitoring requirements that would be included in the permit to mine in order to avoid duplicate or overlapping requirements in the two permits. However, at present it is unclear what the ambient water quality monitoring requirements will be in the permit to mine, and we believe that the ambient water quality monitoring requirements need to be sufficient to ensure that any unauthorized discharges to surface waters are able to be identified in a timely manner so that they can then be remedied.

***Method detection limits for arsenic.*** The draft permit contains water quality based effluent limits for arsenic calculated by considering Michigan water quality standards that apply in the Menominee River and specifies a quantification level for arsenic at 1.0 µg/L. However, the Clean Water Act requires that permits include limits which are protective of water quality standards of downstream states. (See 33 U.S.C. § 1342(b)(5)). The downstream water quality standard promulgated by the State of Wisconsin for the protection of the drinking water use in Lake Michigan is 0.2 µg/L. We recommend that the permit require that measurements for arsenic in the discharge as well as in the Menominee River and Shaky River watershed be done using a

method with a quantification level at 0.5 µg/L, which is the lowest quantification level of any method approved under 40 CFR § 136 (EPA-NERL: 200.9, Determination of Trace Elements by Stabilized Temperature Graphite Furnace Atomic Absorption). This will enable MDEQ and EPA to obtain better data to evaluate whether the discharge has the potential to exceed the applicable Wisconsin arsenic standard.

When the Proposed Permit is prepared, please forward a copy and any significant comments received during any public notice period to [r5npdes@epa.gov](mailto:r5npdes@epa.gov). Please include the permit number, the facility name, and the words "Proposed Permit" in the message title. If you have any technical questions related to EPA's review, please contact Krista McKim at (312) 353-8270 or at [mckim.krista@epa.gov](mailto:mckim.krista@epa.gov).

Sincerely,

Kevin M. Pierard, Chief  
NPDES Programs Branch

cc: Alvin Lam, MDEQ, electronically  
Joe Maki, MDEQ, electronically

bcc: Scott Ireland, Chief, Section 1  
Barbara Wester, ORC

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